

prison of Pentonville, and they were of opinion that it was constructed on a good principle, and was well calculated to maintain discipline, method, and good order; and particularly so under the expensive system of management there carried on, and the peculiar inducements held out to good behaviour; but the cost of a prison upon that model, suitable for this county, would not be less than 25,000*l*. Some of the committee had visited the county prison at Hertford, which had been remodelled at a comparatively small expense, and would now accommodate 140 prisoners in separate cells. The sum already expended there was 3,200*l*., and a further outlay of 1,000*l*. was contemplated. These alterations had been sanctioned by the Secretary of State. The works had been carried on under the able superintendence of Mr. Thos. Smith, the Herts county surveyor. The committee were not sure that the Bedford prison could be altered in the same manner, at so small a cost; but before they recommended so large an outlay as 25,000*l*. they begged to have the authority of the court to direct the county surveyor to confer with Mr. Smith, and visit the Hertford prison, and to request Mr. Smith to meet the committee at Bedford, to ascertain whether the prison of that county could be so remodelled, and ascertain the probable expense of doing it. The committee were of opinion that the house of correction must be reconstructed, if not altogether given up; they also proposed to apply to the Secretary of State for Major Jebb's assistance, when they have ascertained whether it would be practicable to alter and enlarge the present gaol at a reasonable expense.

The report was received and adopted, and the court requested the committee to continue their labours.

Lord Charles Russell said, he regretted that other duties would prevent his attendance on the committee, and requested that some gentleman living near Bedford might be appointed in his stead.

The name of the Rev. W. S. Chalk was submitted to, and approved of by the court, in the room of Lord Charles.

The Chairman then suggested that the gaol committee should meet on the 7th of July, and that Mr. Giles should be directed to attend them, and that he should visit the Hertford prison in his way. These suggestions were unanimously approved of.

PAYNE'S WOOD PATENT.

At first reading of the above head, we had, with many others, concluded that Mr. Payne's was another of the many wood pavement patents now before the public, and we had reserved ourselves in this expectation, until we paid a visit to Mr. Payne's office and works the other day. We were then undeceived. It is a WOOD PRESERVING PATENT, and for preserving other vegetable substances.

Most of our readers are familiar with Kyan's patent. And the word Kyanizing, as applied to timber, is now one of the household we were going to say, but we must build a word of the same structure, a shopfold term. A good deal of controversy is on foot as to the merits, or rather the demerits of Kyan's process, but we will not anticipate.

We have Sir William Burnett's and Margary's processes also to make our readers acquainted with, and for the present, therefore, confine ourselves to Mr. Payne's.

Oh that somebody would undertake to write a proper manual or "hand-book" of chemistry; and that the good old Saxon phraseology could be adhered to in it, or, at any rate, put in that juxtaposition with the ponderous nomenclature of classic derivation, so as to enable an English reader who boasts of proprietorship in no more than his "mother tongue," to keep pace with the pedantry of the scholars. Two bodies—sulphate of iron and sulphate of lime—are used by Mr. Payne to effect the preservation of timber, &c.; both bodies are held in solution with water, and when united form what is termed an insoluble compound. The union in the case of timbers is promoted after this fashion: the wood is placed in a solution of iron, and the cylinder in which it is placed is exhausted by the air-pump, which causes the solution to take possession of the interstices of the wood instantaneously. It is then placed in a solution of lime, and enormous pressure applied, by which it is forced into the

wood, and the two solutions instantly solidify, and make the timber as hard and pretty nearly as heavy as stone. At all events, it makes a piece of fir as hard as oak, and would render the most spongy substance solid. To shew the effect of the combination of the solutions, a small quantity of each is placed in two glass vessels, and when separate, are as liquid as any water or spirit. They are then poured together, and instantly become solid. This exemplifies the effect of the solutions meeting in the pores of wood or any other open substance. Pieces of various kinds of wood submitted to the process were exhibited, and on cutting them open iron was detected in the very heart of the most solid kinds. A small piece of beech was then weighed and placed in the solution of iron, under a glass receiver, and the air exhausted, the wood giving out its air bubbles from every portion of its surface; in an incredibly short space of time it was saturated, and had nearly doubled its weight. It was split open, and shewed the presence of iron in every part. We then saw small pieces of the wood, which were perfectly dry, submitted to the flame of a candle, when they would not ignite, but were charred by holding them there some time, getting red hot only as a piece of metal would. At any rate, the active combustible character of the wood was destroyed, and reminded us of the effects of fire on poplar, which, as many of our readers know, is used for floor-boards in many rural districts for the safety of bed-chambers.

It certainly seems an extraordinary change for the wood to undergo—that in being deprived of the air and moisture by exhaustion, and the place of these being supplied by foreign bodies—they appear to make good their usurpation against all the dislodging forces of fire or water. The wood, in fact, is no longer wood; if we may use the expression, it is a block of compounds of which vegetable fibre forms hardly a superior part, for in the case of a piece of beech that was saturated, nearly 100 per cent. was added to it in density. There, in one you have fibrous texture, with a strong metallic and calcareous impregnation; light, spongy, and decaying woods are made by this process ponderous and durable—the change is as great, and to the eye as marvellous (we have no doubt it will become as common-place) as to see, by the union of powdered plaster, and the flowing liquid water, a solid almost instantaneously formed; the which to speak of, is to give a good key to the nature of the chemical working and transformation in this case.

Need we say after this that the wood is next to imperishable? Talk of trade-unions, what do you think of this? If it is not a union of the carpenter, the iron-founder, and the mason, it is very like it; the materials upon which these craftsmen work are united in one, and a thoroughly practical union it is, and an exemplification of the proverb, "union is strength." With strength, also, is secured beauty; the cabinet-maker is not removed from interest in this process, ordinary deal, and our native woods are so usefully charged with this new body, as to prevent the absorption of oils and polishes to a great degree, and so to facilitate the operation of polishing; half the labour and half the material may be said to be saved in the process of polishing otherwise soft woods; and it will surprise many to see how the despised tribes of the English hedge-row may be set forth in successful rivalry with the prouder products of Hispaniola, Cuba, and Honduras. Our glorious oak is converted by the magic of a day's pain, or *paynino*, as we suppose may be said, into the deep ebony of its thousand years' acquirement in a substratum of peat—a dainty strip of wainscot of yesterday's importation was laid before us at the same time with the venerable fragment of one of the piles of old London Bridge, and the junior emulated the senior most vainly and effectively, in colour, weight, and impenetrability; strips of deal, beech, ash, &c., had been operated on and French polished, and might be termed perfectly beautiful. Who shall say what changes in modern joiner's work this process will not be accessory to? we see and anticipate many.

But it has been objected to Mr. Payne's process, that there is a complication in it, a cumbersome and expensive arrangement of machinery, and so it might seem to those who stand at a distance, and do not satisfy themselves with an examination, or do not understand the sim-

placities of mechanical and chemical science. The truth is that the process is one that may be made comparatively self-working; the air pump is not yet so familiar and popular an engine as the water pump, but who knows how soon it may become so? With steam power to the working, and a proper arrangement of cisterns for the respective solutions of iron and lime, exhaustion, charging, immersion, every branch of the process may be effected with the intervention of merely a finger; and what we like best in this great improvement is, that it makes no inroad on the prescriptive territory of human industry—this it is in which, by the way, we may be permitted to observe, is the grand distinction between machinery as a friend and machinery as an enemy. The former comes in to aid man in his emergency—the latter thrusts himself forward, coveting possession of the workman's territory. Air and water, the greatest blessings to man in their way, are devastating curses out of the way. There is indeed such a thing as "too much of a good thing."

Mr. Payne's process is a cheap one, and must, with the improvements and familiarity we have hinted at, become more so. At present the charge is 1*l*s. per load of 50 cubic feet, which may be taken at an average of 8 per cent.

Where the tool has to pass over the wood thus prepared, it is clearly an advantage that this be done at an early stage, before the compound solution has had time to become thoroughly solidified; but we have not experience enough yet to say what, and if any, amount of damage is sustained in the general working; and the more general introduction of the patent, which is sure to follow of its being more generally known, will solve all doubts upon this head; but we do not apprehend any difficulty.

We trust we have thus given a sufficient special exposition of this matter; but we may have occasion to return to it again, on noticing the other plans of a kindred character under the designation of the several gentlemen whose names we set out with enumerating.

MADAME TUSSAUD'S HISTORICAL EXHIBITION OF WAX FIGURES, BAKER-STREET, PORTMAN-SQUARE.

It has been the custom to describe this exhibition in ordinary and common-place terms, and to dwell chiefly upon the glittering and Aladdin-like surprise which it excites! Differing, however, from some of our contemporaries, whether in the impression a view of it often pleasantly repeated has made upon us, or that our particular vocation inclines our attention towards the foundation upon which any remarkable superstructure may happen to be reared, we know not, but we think of it as higher in motive and effect than many have expressed. Exhibitions of wax figures were always popular: we remember, in our boyish days, to have gazed delightedly upon humble attempts of the kind to represent actors in some or other of the gloomy or gorgeous scenes with which the drama of life abounds, but of the dignity and circumstance Madame Tussaud and Sons have contrived to throw into and around this particular species of artistic modelling, there is no previous example: the result is a striking instance of successful enterprise.

The elements combined in creating this superiority are, evidently, a nobler conception of the art itself, a more perfect manipulation than heretofore attained, and a mastery in the distribution of colour; comprehending not only the endless variety of tints shewn in the human countenance, from infancy to extreme age, but those incident to climate, habit, and the predominating characteristics of individuals. It is, therefore, in truth, a new development of the principles admired and cherished in painting and sculpture which here constitute the basis of continued attraction—form and colour—shadowing forth participants in great events, and reviving a recollection of the heroic and talented amongst mankind. Such are our impressions of the merits of the exhibition as one of art, and of the talent applied to produce it. The fitting and decoration of the spacious and magnificent saloon, or hall, in which the figures are grouped, is an additional evidence of the taste of the proprietors; historical reminiscence is the feature constantly kept under view, and accomplished by placing